

ABSTRACT

1 In-circuit-emulation of an integrated circuit including
2 a digital data processor capable of executing program
3 instructions. A first debug event is detected during normal
4 program execution. This causes the in-circuit-emulation to
5 suspend program execution except for real time interrupts. A
6 debug frame counter increments on each interrupt and decrements
7 on each return from interrupt. If a debug event is detected
8 during an interrupt service routine, that interrupt service
9 routine is suspended and the count of the debug frame counter
10 is stored. Execution of other interrupt service routines in
11 response to corresponding interrupts is still permitted. The
12 integrated circuit includes plural debug event detectors and
13 the debug frame count is stored at the detector detecting a
14 debug event during an interrupt service routine. This permits
15 a determination of the order of interrupts triggering debug
16 events by reading the stored debug frame count from each debug
17 event detector.